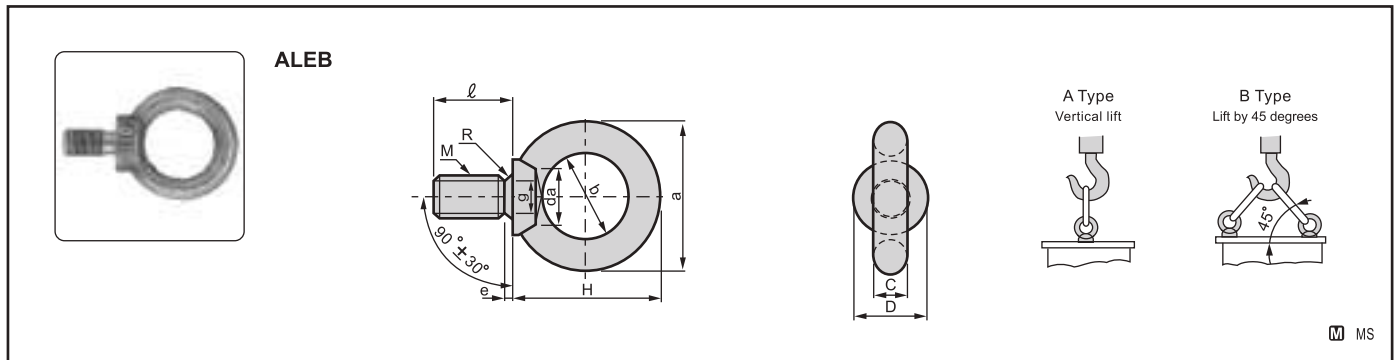


Section J
COMPONENTS FOR
DIE LIFTING &
DIE STORAGE



Lifting Eye Bolts

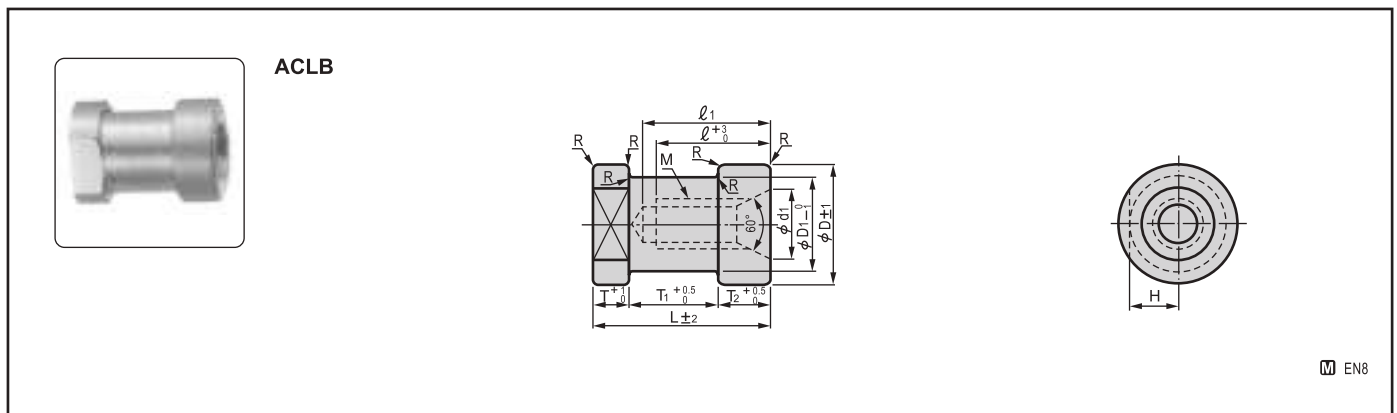


MXP	a	b	C	D	H	l	e	g	R	da	Maximum allowable load N (kgf)		Catalog No.	
											A: Vertical 1pc.	B: 45° 2pcs	Type	M
6 X1.0	24.9	14.5	5.2	12.8	28.45	15	3	4.7	1.0	7.9	392 { 40 }	392 { 40 }	ALEB	6
8 X1.25	32.6	20	6.3	16	33.3	15	3	6	1.0	9.2	785 { 80 }	785 { 80 }		8
10 X1.5	41	25	8	20	41.5	18	4	7.7	1.2	11.2	1471 { 150 }	1471 { 150 }		10
12 X1.75	50	30	10	25	51	22	5	9.4	1.4	14.2	2157 { 220 }	2157 { 220 }		12
16 X2.0	60	35	10.5	30	60	27	5	13	1.6	18.2	4413 { 450 }	4413 { 450 }		16
20 X2.5	72	40	16	35	71	30	6	16.4	2	22.4	6178 { 630 }	6178 { 630 }		20
24 X3.0	90	50	20	45	90	38	8	19.6	2.5	26.4	9316 { 950 }	9316 { 950 }		24
30 X3.5	110	60	25	60	110	45	8	25	3	33.4	14710 { 1500 }	14710 { 1500 }		30
36 X4.0	133	70	31.5	70	131.5	55	10	30.3	3	39.4	22555 { 2300 }	22555 { 2300 }		36
42 X4.5	151	80	35.5	80	150.5	65	12	35.6	3.5	45.6	33342 { 3400 }	33342 { 3400 }		42
48 X6.0	170	90	40	90	170	70	12	41	4	52.6	44130 { 4500 }	44130 { 4500 }	48	

• kgf = N X 0.101972

	ORDERING CODE	CATALOG NO.	M
		ALEB	16

Cast-in Lifting Bushes



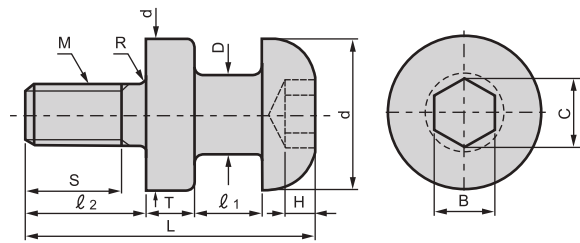
Maximum allowable load N (kgf)		MXP	D	D1	d1	l	l1	L	T	T1	T2	H	R	Catalog No.		
Hook	Eye bolt													Type	M	
2 pcs.	Vertical lift/1pc.	Lift by 45 degrees/2pcs.														
3730 { 380 }	2160 { 220 }	2160 { 220 }	12 X1.75	38	28	18	30	40	55	10	30	15	14	2	ALEB	12
6620 { 875 }	4410 { 450 }	4410 { 450 }	16 X2.0	46	36	22	35	45	55	10	30	15	18	2		16
3830 { 900 }	5880 { 600 }	5880 { 600 }	20 X2.5	48	38	28	45	55	70	15	35	20	19	2		20
13340 { 1360 }	9810 { 1000 }	9810 { 1000 }	24 X3.0	55	45	36	55	65	85	20	45	20	22.5	2		24
19810 { 2020 }	16670 { 1700 }	16670 { 1700 }	30 X3.5	65	52	42	65	75	95	25	50	20	26	3		30
58450 { 5960 }	22560 { 2300 }	22560 { 2300 }	36 X4.0	85	70	48	75	90	110	30	55	25	35	3		36

	ORDERING CODE	CATALOG NO.
		ACLB 20

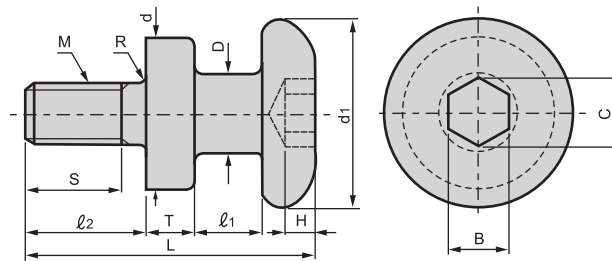
Lifting Hooks (Bolt Type)



ALHBT



ALHLHBT
(Large head bolt type)



Material : EN8 (Blakodised)

M X P	D	d	d1	l ₁		l ₂	S	T	L		R	H	B	C	N 1pc. (kg/1pc.) Steel safety coefficient 10	Catalog No.	
				ALHBT	ALHLHBT				ALHBT	ALHLHBT						Type	M
10 X 1.5	13	32	42	10	18	20	16	8	46	54	1.5	5	8	9.2	2452 {250}	ALHBT	10
12 X 1.75	16	36	48	13	20	24	20	10	57	64	1.5	6	10	11.7	3530 {360}		12
16 X 2.0	20	40	52	18	25	30	25	13	75	82	2	9	14	16.3	6669 {680}		16
20 X 2.5	25	48	62	20	28	37	32	16	90	98	2	12	17	19.8	10395 {1060}	ALHLHBT	20
24 X 3.0	32	58	76	25	33	47	40	20	111	119	2.5	13	19	22.1	15004 {1530}		24
30 X 3.5	36	68	88	30	40	56	48	22	131	141	3	16	22	25.6	23830 {2430}		30
36 X 4.0	40	78	100	30	40	68	58	25	148	158	3	18	27	31.4	34814 {3550}		36

• kgf = N X 0.101972

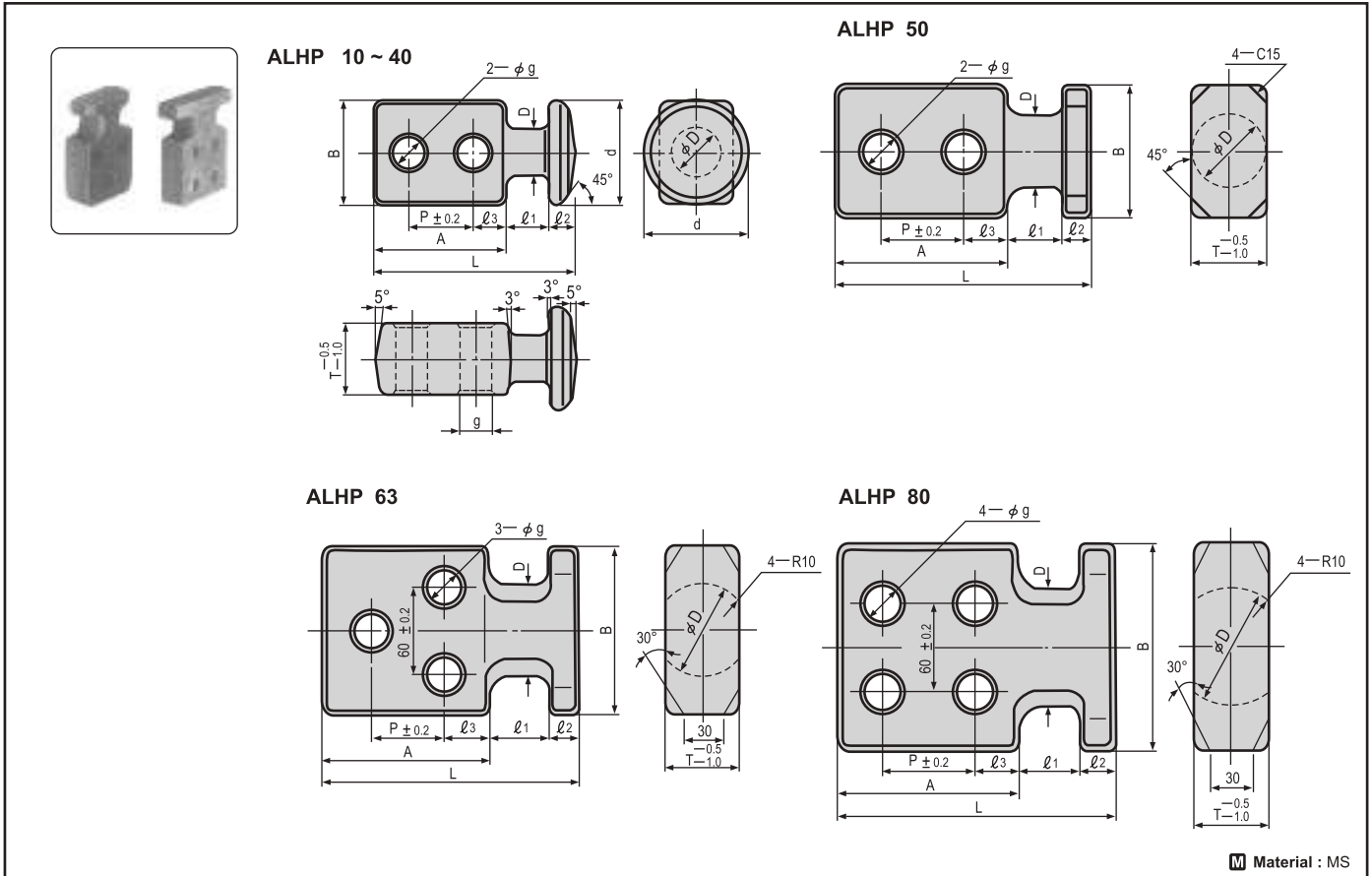


ORDERING
CODE

CATALOG NO.

ALHBT 20

Lifting Hooks - Plate Type



d	B	T	L	A	l ₁	l ₂	l ₃	P	g	N/pc. (kgf/1pc.) (Steel safety coefficient 10)	Catalog No.	
											Type	D
28	28	18	50	32	10	8	8	16	7	1569 { 160 }	ALHP	10
32	32	20	56	38	10	8	10	18	9	3530 { 360 }		12
36	36	24	67	46	13	8	12	22	11	4511 { 460 }		16
40	40	26	88	60	18	10	15	30	14	5492 { 560 }		20
48	48	35	92	60	20	12	15	30	14	6570 { 670 }		25
55	55	40	118	80	25	13	20	40	18	12160 { 1240 }		32
70	70	50	138	93	30	15	24	45	22	19123 { 1950 }		40
—	90	50	170	115	35	20	30	55	26	27459 { 2800 }		50
—	115	50	175	115	40	20	30	55	26	39227 { 4000 }		63
—	140	50	185	120	40	25	30	60	26	50995 { 5200 }		80

•(KGF) = NX 0.101972

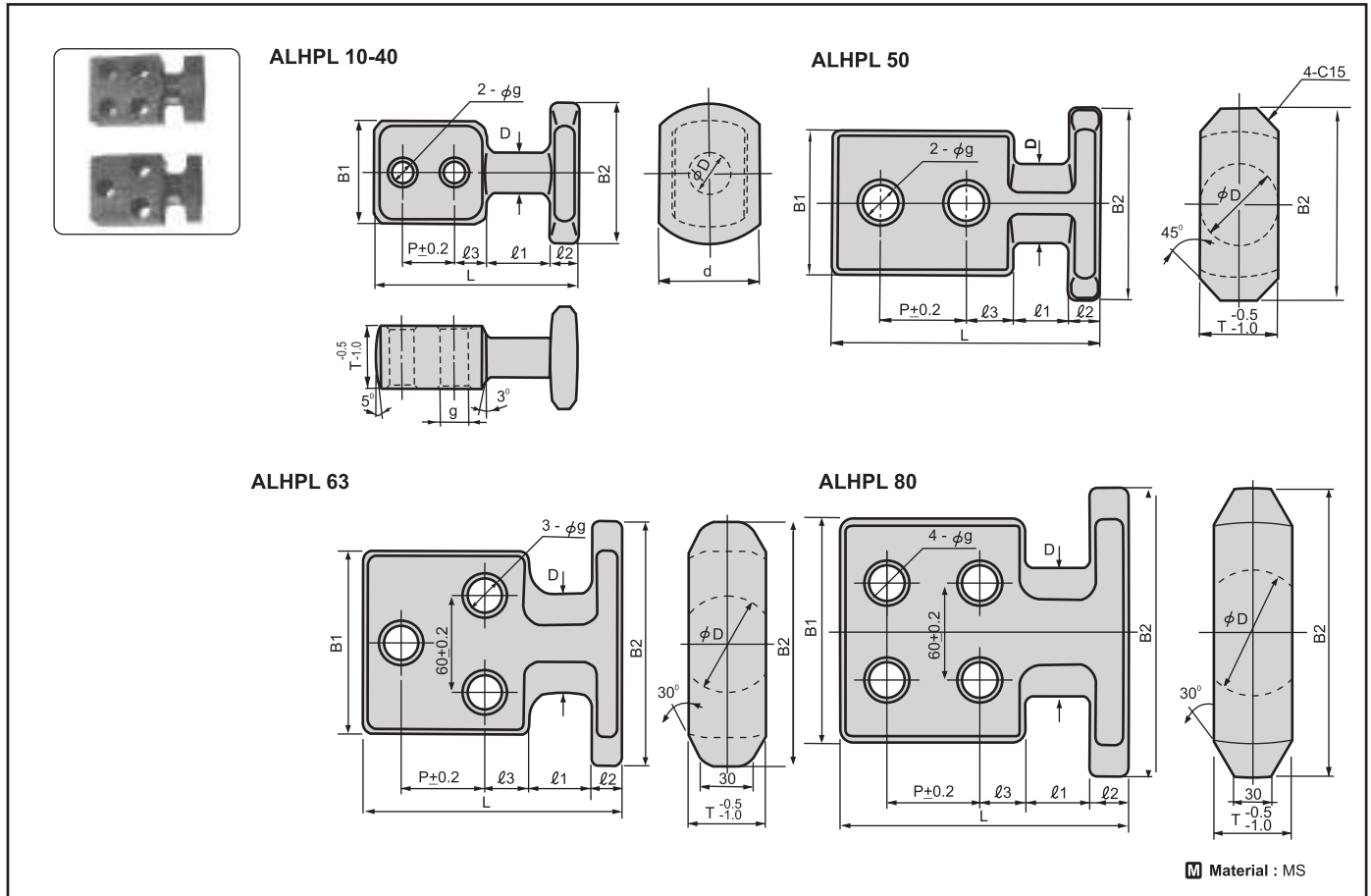


ORDERING
CODE

CATALOG NO.

ALHP 50

Lifting Hooks - Large Head Plate Type



d	B1	B2	T	L	l1	l2	l3	P	g	N/1 pc. (kgf/1pc) (Steel safety coefficient 10)	Catlog No.	
											Type	D
28	28	38	18	60	20	8	8	16	7	1569(0160)	ALHPL	10
32	32	44	20	66	20	8	10	18	9	3530(0360)		12
36	36	50	24	78	20	12	12	22	11	4511(0460)		16
40	40	56	26	97	25	12	15	30	14	5492(0560)		20
48	48	68	35	98	25	13	15	30	14	6570(0670)		25
55	55	77	40	125	30	15	20	40	18	12160(1240)		32
70	70	100	50	143	35	15	24	45	22	19123(1950)		40
-	90	120	50	170	35	20	30	55	26	27459(2800)		50
-	115	155	50	175	40	20	30	55	26	39227(4000)		63
-	140	180	50	185	40	25	30	60	26	50995(5200)		80

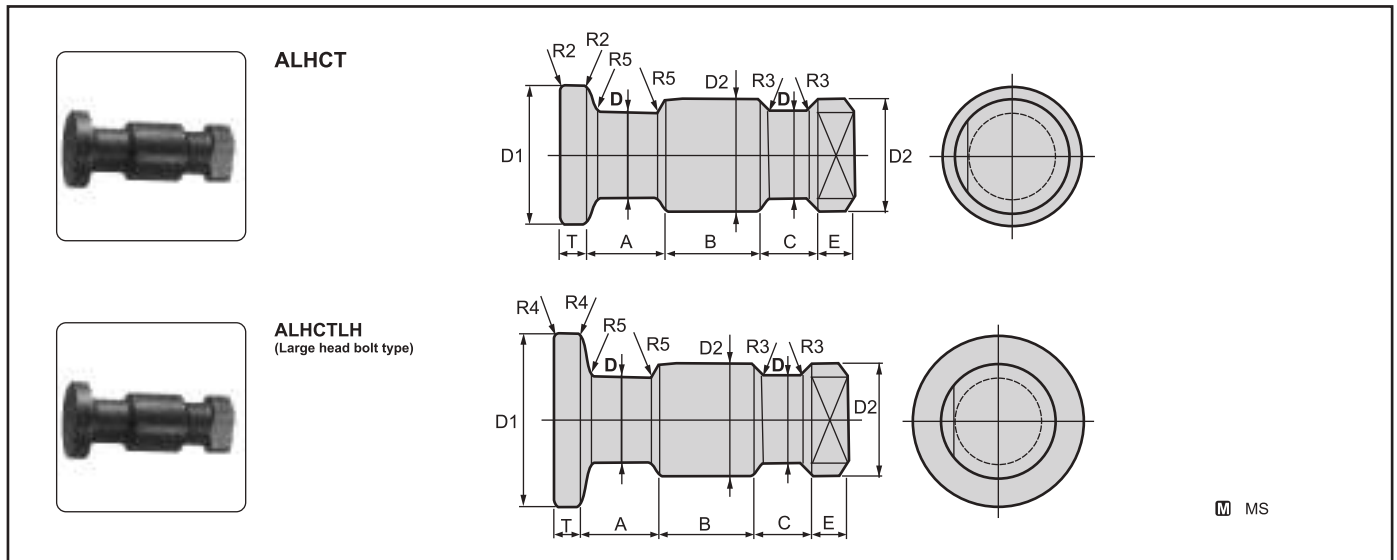


ORDERING
CODE

CATALOG NO.

ALHPL 50

Lifting Hooks - Cast-in Type



D	D1		D2	T	A	B	C	E	N/1 pc. (kgf/1pc)	Catalog No.	
	ALHCT	ALHCTLH								Type	D
25	46	60	36	12	25	30	15	16.6	7940(810) 13140(1340) 16570(1690) 20500(2090) 32070(3270) 62860(6410)	ALHCT ALHCTLH	25
32	55	70	42	12.4	30	40	20	16.8			32
36	60	80	46	17.6	35	45	25	17			36
40	70	90	55	18.1	35	60	30	17.4			40
50	90	120	76	23.9	35	70	40	18.1			50
70	120	140	100	30.2	40	80	40	19.4			70

•[KGF] = NX 0.101972

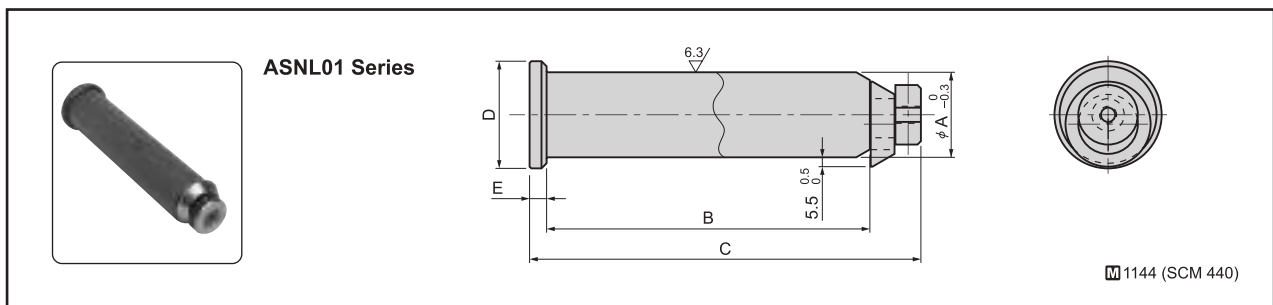


ORDERING
CODE

CATALOG NO.

ALHCT 50

Lifting Pin



A	B	C	D	E	Catalog No.	
35	125	165	45	10	ASNL01	3512
50	190	230	63	10		5019
63	280	320	76	10		6328
80	320	370	89	15		8032




ORDERING
CODE

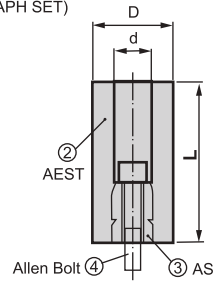
CATALOG NO.

ASNL01 5019

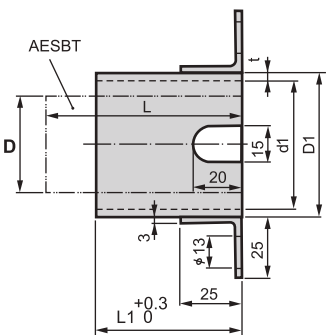
Urethane Stock Block Sets



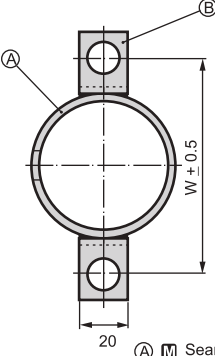
APHBT
(AESBT + APH SET)






(Urethane stock block)




(Stroke end Pipe)

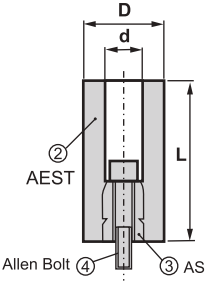


(A)  Seamless pipe MS
 (B)  MS
 (2)  Shore A90

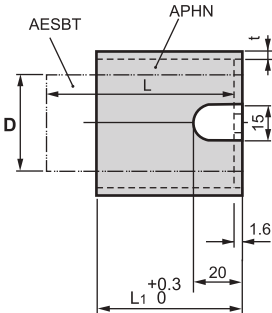
Urethane Stock Blocks ② ③ ④ AESBT				Stroke end pipe ① ② APH					Sleeve ③ AS	Allen Bolt ④	Catlog No.		L	L1	Color
D	L	d	D1	L1	d1	t	W	Type			D				
40	80	-	60.5	60	52.9	3.8	91	-	M8-45 (Qty : 1)	APHBT	40	80	60	R (Red) Y (Yellow)	
50	110	14	89.1	85	80.7	4.2	119	AS-14			50	110	85		
70	140		90	101.6	100		93.2		132		AS-22	70	140		100
		110	90		100	110	90	100	110						
90	140	22	139.8	100	130.8	4.5	170	M12-55 (Qty : 1)	90		140	100	110		
100			90	165.2	100	155.2	5.0		195		100	140	100		110
					110										



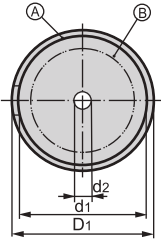
APHBTN
(AESBT + APHN SET)






(Urethane stock block)



(Stroke end Pipe)



(A)  Seamless pipe MS
 (B)  MS
 (2)  Shore A90


Urethane Stock Blocks ② ③ ④ AESBT				Stroke end pipe ① ② APHN					Sleeve ③ AS	Allen Bolt ④	Catlog No.		L	L1	Color
D	L	d	D1	L1	d1	d2	t	Type			D				
40	80	14	60.5	60	52.9	9	3.8	AS-14	M8-45 (Qty : 1)	APHBTN	40	80	60	R (Red) Y (Yellow)	
50	110		89.1	85	80.7		4.2				119	50	110		85
70	140	22	101.6	110	93.2	13	4.5	AS-22	M12-55 (Qty : 1)		70	140	110		
90			90		100						110				90
100			152.5		142.5		5.0				100				



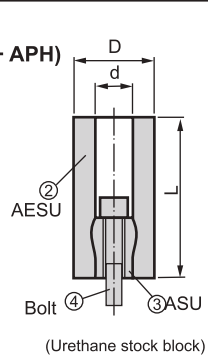
ORDERING CODE

CATALOG NO.	L	L1	R - Y
APHBT 50	110	85	R
APHBTN 70	140	110	Y
APHUB 40	80	60	R
APHUBN 90	140	110	Y

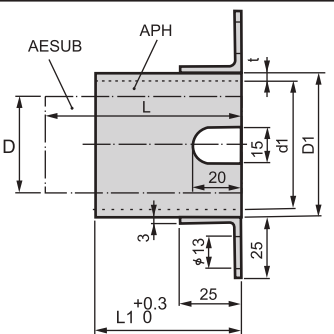
Urethane Stock Block Sets



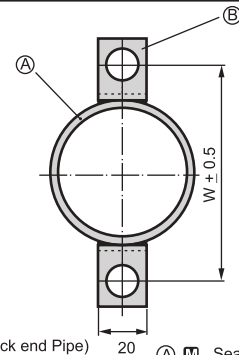
APHUB (AESUB + APH)
(Without Bottom)



(Urethane stock block)



(Stroke end Pipe)




A M Seamless pipe MS
B M MS
2 H Shore A90

Urethane Stock Block ②③④ AESUB			Stroke end pipe ① APH					Sleeve ③ ASU	Bolt ④	Catlog No.		L	L1	Color
D	L	d	D1	L1	d1	t	W			Type	D			
40	80	14	60.5	60	52.9	3.8	91	ASU14	M8-45 (Qty : 1)	APHUB	40	80	60	R (Red)
90	140	22	139.8	90	130.8	4.5	170	ASU22	M12-55 (Qty : 1)		90	140	90	Y (Yellow)

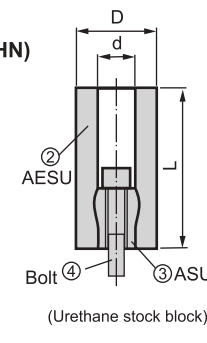


ORDERING CODE

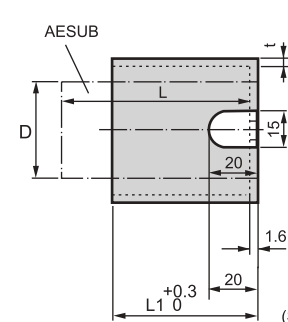
CATALOG NO.	L	L1	R - Y
APHUB 40	80	60	Y



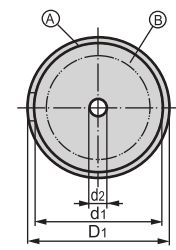
APHUBN (AESUB + APHN)



(Urethane stock block)



(Stroke end Pipe)



A M Seamless pipe MS
B M MS
2 H Shore A90

Urethane Stock Block ②③④ AESUB			Stroke end pipe ① APHN					Sleeve ③ ASU	Bolt ④	Catlog No.		L	L1	Color
D	L	d	D1	L1	d1	d2	t			Type	D			
40	80	14	60.5	60	52.9	9	3.8	ASU14	MB-45 (Qty : 1)	APHUBN	40	80	60	R (Red)
70	110	22	101.6	85	93.2	13	4.2	ASU22	M12-55		70	110	85	Y (Yellow)
90	140	22	139.8	110	130.8	13	4.5	ASU22	M12-55 (Qty : 1)		90	140	110	

The Combination list of stroke end pipes and urethane stock blocks


Set name	Stroke end pipe	Urethane Stock Blocks			
		②③④	Components		
			② Urethane	③ Sleeve	④ Bolt
APHBT	APH	AESBT	AEST	AS	M
APHBTN	APHN				
APHUB	APH	AESUB	AESU	ASU	
APHUBN	APHN				



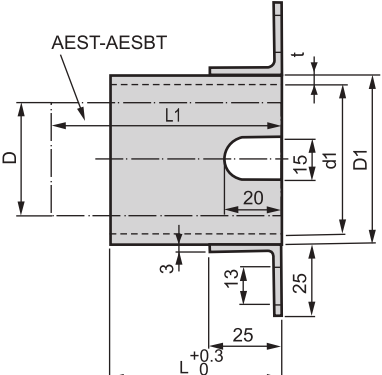
ORDERING CODE

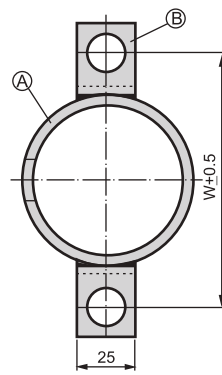
CATALOG NO.	L	L1	R - Y
APHUBN 70	110	85	Y

Stroke End Pipes



APH






Without Bottom

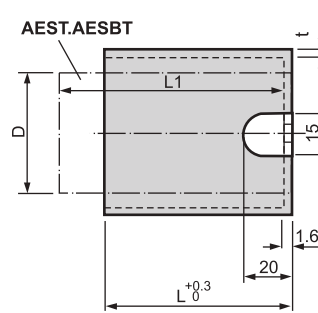
Ⓐ Seamless pipe MS

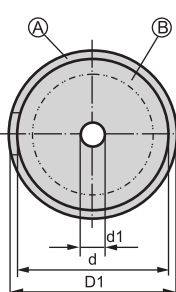
Ⓑ MS

AEST - AESBT		D1	d	t	W	Catlog No.		L	COLOR	
D	L1					Type	D			
40	80	60.5	52.9	3.8	91	APH	40	60	R (Red)	
50	110	89.1	80.7	4.2	119		50	85		
70	140	101.6	93.2	4.2	132		70	110		
90	140	139.8	130.8	4.5	170		90	110		
100	140	165.2	155.2	5	195		90-100	110	Y (Yellow)	
110	140	190.7	180.1	5.3	220		90-100	110		
							100	110		
								110	110	



APHN





With Bottom

Ⓐ Seamless pipe MS

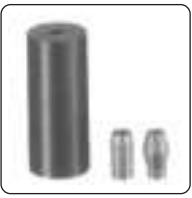
Ⓑ MS

AEST - AESBT		D1	d	d1	t	Catlog No.		L	COLOR
D	L1					Type	D		
40	80	60.5	52.9	9	3.8	APHN	40	60	R (Red)
50	110	89.1	80.7		4.2		50	85	
70	140	101.6	93.2		4.2		70	110	
70	140	101.6	93.2	4.2	7022		110		
90	140	139.8	130.8	13	4.5		90	110	Y (Yellow)
100	140	152.5	142.5		5		100	110	
110	140	190.7	180.1		5.3		110	110	



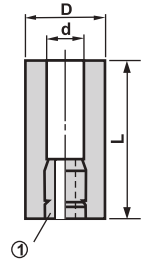
ORDERING CODE	CATALOG NO.	L	R - Y
APH 90	110	R	

Urethane Stock Blocks

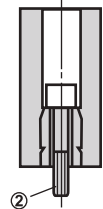


**AEST, AEBST,
AESU, AESUB**

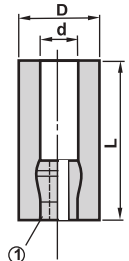
AEST



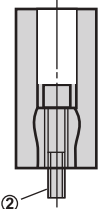
AESBT



AESU



AESUB



H Hardness : SHORE A90

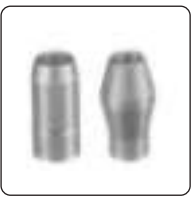
d	①		② Allen Bolt	Catlog No.	
	AEST- AESBT	AESU- AESUB		Type	D-L
14	S14	SU14	M8-45	AEST	* 40-80
				AESBT	50-110
				*AESU	70-140
22	S22	SU22	M12-55	*AESU	* 7022140
				*AESUB	90-120
					* 90-140
					100-140

AESU and AESUB are available only in the sizes marked with an *.



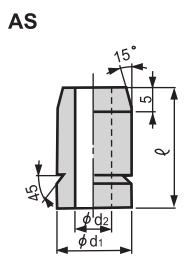
**ORDERING
CODE**

CATALOG NO.	D	L
AEST	50	110

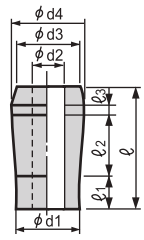


**AS, ASU
Sleeve**

AS



ASU



M Material : MS

d1	d2	d3	d4	ℓ	ℓ1	ℓ2	ℓ3	Urethane d	Catlog No.
16	9	-	-	30	-	-	-	14	AS14
24	13	-	-	35	-	-	-	22	AS22
24	13	-	-	100	-	-	-	22 (L170 or more)	AS22-100
14	9	13	19	30	7	10	3	14	ASU14
22	13	20	27					22	ASU22



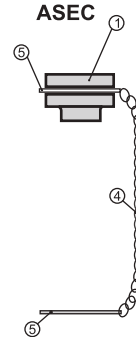
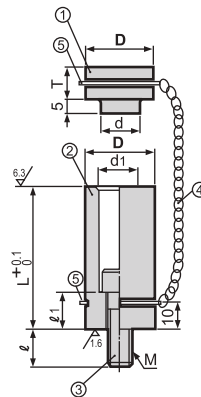
**ORDERING
CODE**

**CATALOG NO.
ASU14**

Stroke End Blocks



ASEBS
ASEBN
ASEC



Catalog No.	Components				
	①	②	③	④	⑤
ASEBS	○	○	○	○	○
ASEBN	○	○	○		
ASEC	○			○	○

- ① M MS
- ② M Allen Bolt
- ③ Chain
- ④ Standard circlip

Catalog No.		②		①	
Type	D	L 0.1mm.increments	Color	T 5mm.increments	Color
ASEBS ①②③④⑤	14	22.0~100.0	R (Red)	10 ~ 50	R (Red)
	16				
	18				
	20	22.0~120.0	Y (Yellow)		Y (Yellow)
	25				
	32	25.0~200.0	N (Normal)		N (Normal)
	38				
50					
60				10 ~ 50	
				55 ~ 100	
				10 ~ 50	
				55 ~ 100	
ASEBN ②③	14	22.0~100.0	R (Red)	—	—
	16				
	18				
	20	22.0~120.0	Y (Yellow)		—
	25				
	32	25.0~200.0	N (Normal)		—
	38				
	50				
60					

③ Table of bolt sizes

D	d	d1	M×P	ℓ	ℓ1	L	③
14	7	8	M4 0.7	10	10	22.0~ 80.0	M 4 × 20
				35	35	80.1~100.0	M 4 × 45
16	7	8	M4 0.7	10	10	22.0~ 80.0	M 4 × 20
				35	35	80.1~100.0	M 4 × 45
18	8.5	9.5	M5 0.8	10	10	22.0~ 80.0	M 5 × 20
				35	35	80.1~100.0	M 5 × 45
20	10	11	M6 × P1.0	9	9	22.0~ 80.0	M 6 × 20
				11	11	80.1~100.0	M 6 × 45
				54	54	100.1~120.0	M 6 × 65
				12	8	22.0~ 80.0	M 8 × 20
25	13	14	M8 × P1.25	14	14	80.1~100.0	M 8 × 45
				51	51	100.1~120.0	M 8 × 65
				76	76	120.1~170.0	M 8 × 90
				12	8	22.0~ 80.0	M 8 × 20
32	13	14	M8 × P1.25	14	14	80.1~100.0	M 8 × 45
				51	51	100.1~120.0	M 8 × 65
				76	76	120.1~170.0	M 8 × 90
				16	9	25.0~ 80.0	M10 × 25
38	16	17	M10 × P1.5	17	17	80.1~100.0	M10 × 50
				53	53	100.1~120.0	M10 × 70
				83	83	120.1~200.0	M10 × 100
				18	7	25.0~ 80.0	M12 × 25
50	18	20	M12 × P1.75	20	20	80.1~100.0	M12 × 50
				50	50	100.1~120.0	M12 × 70
				80	80	120.1~200.0	M12 × 100
				18	7	25.0~ 80.0	M12 × 25
50	18	20	M12 × P1.75	20	20	80.1~100.0	M12 × 50
				50	50	100.1~120.0	M12 × 70
				80	80	120.1~200.0	M12 × 100
				18	7	25.0~ 80.0	M12 × 25

Catalog No.		①		
Type	D	T 5mm.increments	Color	
ASEC ①④⑤	14	10 ~ 50	R (Red)	
	16			
	18			
	20			
	25			
	32			
	38			
	50			
	60			
	60			
			10 ~ 50	
			55 ~ 100	
			10 ~ 50	
			55 ~ 100	

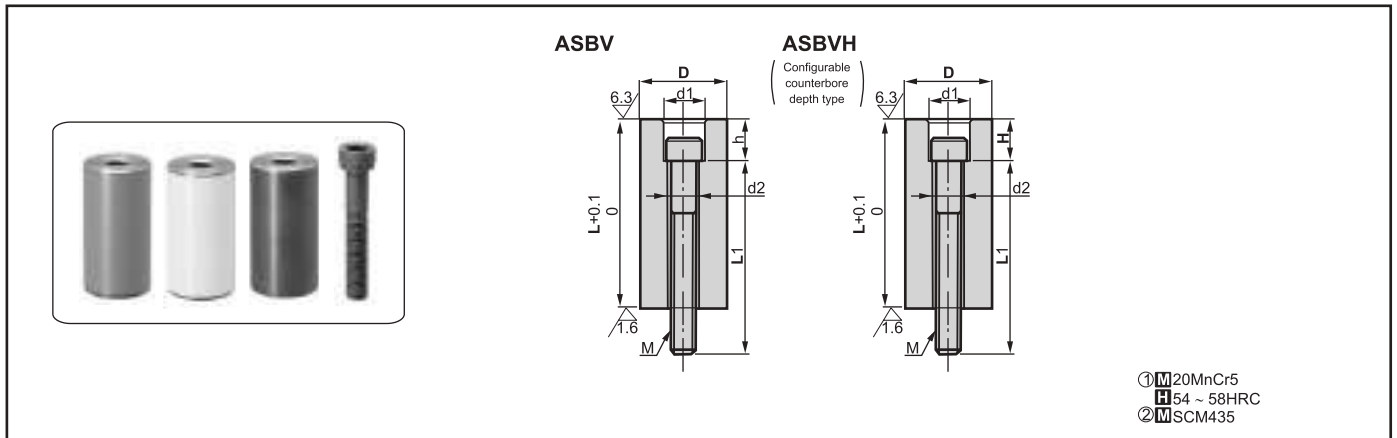
① N (Normal) ... ⑤ Black oxide (Fe3O4)



ORDERING
CODE

CATALOG NO.	L	② R - Y - N	T	① R - Y - N
ASEBS 20	90.0	R	25	Y
ASEC 20	-	-	10	Y

Stroke End Blocks - Hardened Type

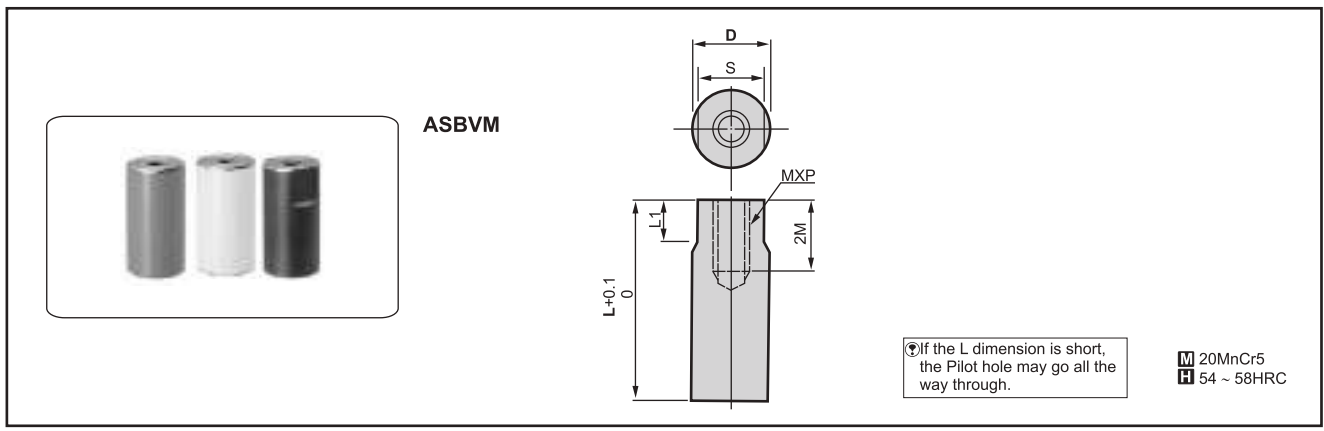


MXP	d1	d2	h	Catalog No.		Colour	L1
				Type	D		
ASBV	M 3X0.5	6	4	5	10	R (Red)	10 ~ 40
					12		
					14		
					16		
	M 4X0.7	8	5	8	18	Y (Yellow)	10 ~ 50
					20		
	M 5X0.8	9.5	6	10	25	N (Normal)	15 ~ 70
	M 6X1.0	11	7	13	32		
	M 8X1.25	14	9	15	38	N (Normal)	15 ~ 100
	M 10X1.5	17	11	18	50		
					60		
	M 12X1.75	20	13	21	60	N (Normal)	15 ~ 120
							25 ~ 150

MXP	d1	d2	Catalog No.		Colour	L1
			Type	D		
M 6X1.0	11	7	ASBVH	20	R (Red)	15 ~ 85
				25		
M 8X1.25	14	9	ASBVH	32	Y (Yellow)	15 ~ 120
				38		
M 10X1.5	17	11	ASBVH	50	N (Normal)	20 ~ 120

ORDERING CODE	CATALOG NO.	D	L	H	Color	L1
	ASBV	38	100	-	Y	100
	ASBVH	38	80	40	Y	60

Stroke End Blocks - Hardened & Tapped Type



MXP	S	L1	Catalog No.		Colour
			Type	D	
M 6X1.0	17	12	ASBVM	20	R (Red)
				25	
M 8X1.25	22	16	ASBVM	32	Y (Yellow)
				38	
M 10X1.5	32		ASBVM	50	N (Normal)

ORDERING CODE	CATALOG NO.	L	Color
	ASBVM 25	50	Y



Disappearing Gauge



ADAG

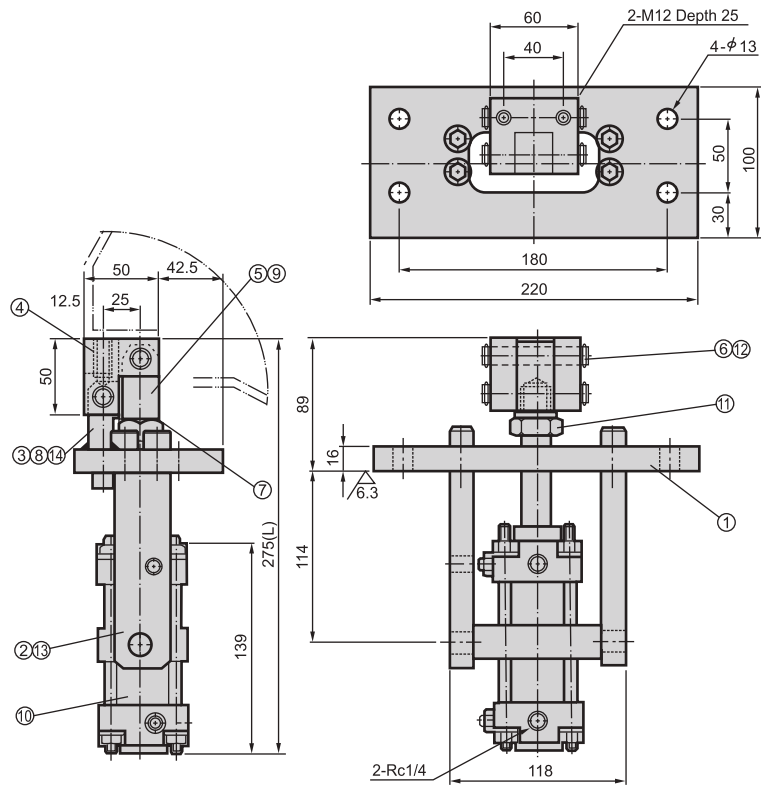


Table of Components

No.	Description	Qty	Material and Remark
①	Base Plate	1	MS
②	Cylinder Support	2	MS
③	Gauge Bracket Support	1	MS
④	Gauge Bracket	1	MS
⑤	Joint	1	MS
⑥	Joint Pin	2	20MnCr5 HRC55 to 60
⑦	Turning Lock Plate	1	MS T = 0.8

No.	Description	Qty	Material and Remark
⑧	Bushing	2	Drystar ABM1215
⑨	Bushing	1	Drystar ABM1220
⑩	Air Cylinder	1	CA1TN40-50 SMC Make
⑪	Hexagon Nut	1	M20 X P 1.5
⑫	Circlip	4	For φ 12
⑬	Allen Bolt	4	M12 X 40
⑭	Allen Bolt	1	M10 X 35



ORDERING
CODE

CATALOG NO.	L	CYLINDER TRAVEL
ADAG	275	50

Panel Input Detector Gauge



APIDGL (L Type)
APIDGR (R Type)

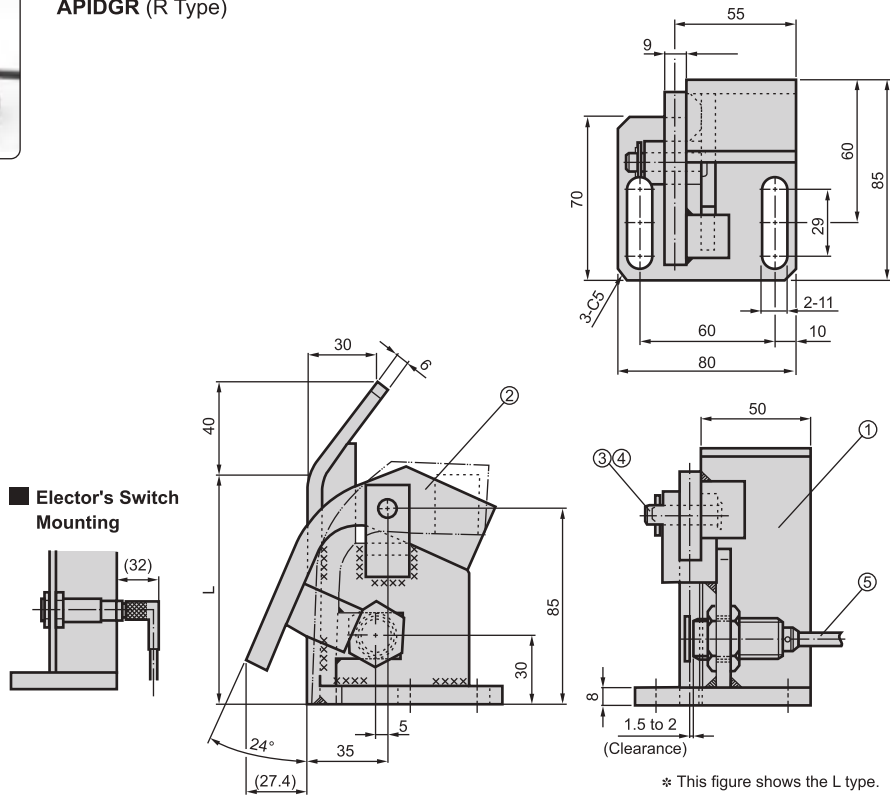


Table of Components

No.	Description	Qty	Material and Remark
①	Gauge	1	MS Chrome-plating
②	Loading Detection Lever	1	MS Chrome-plating
③	Clevis Pin	1	En8 HRC40 to 45
④	E Type Retaining Ring	2	MS
⑤	Proximity switch	1	AC or DC

Weight kg	Catalog No.	L	Switch Type
1.5	APIDGL APIDGR	75	Without switch
1.6		100	With switch (AC/DC)
1.8		150	



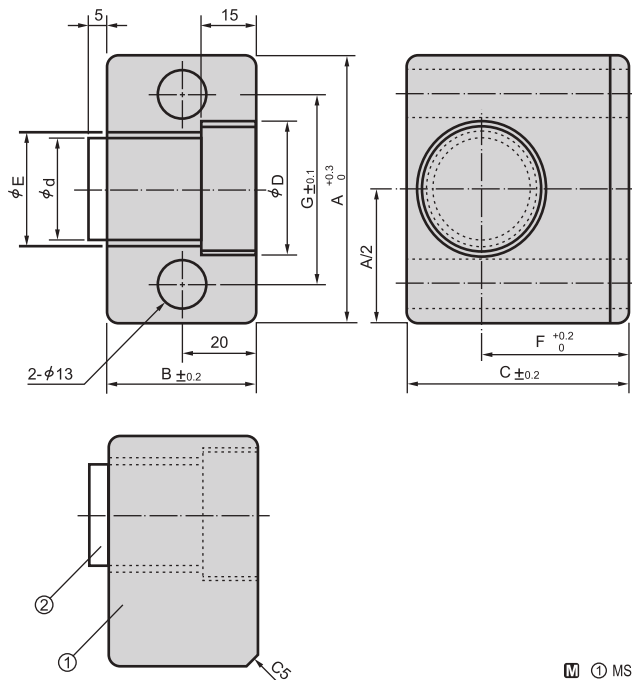
ORDERING CODE

CATALOG NO.	L	Switch Type
APIDGL	100	Without Switch

Cam Stopper



ACS



M ① MS
 ② Urethane
 Shore A90

A	B	C	D	E	F	G	Load N	d
70	40	60	35	30	40	50	5200	27
80	40	70	45	40	45	60	9800	36



ORDERING
 CODE

CATALOG NO. D
 ACS 27